

A CHECKLIST OF THE CEPHALOPODS OF FLORIDA¹

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INTRODUCTION

The cephalopods of Florida have never been reviewed, and little can be found in the literature concerning their systematics or distribution. Unfortunately, the few early reports are either erroneous or the names employed are such as to make present identification difficult or impossible. The first published report seems to be the description of the squid, *Loligo hemiptera*, by Howell in 1868. This squid has since been shown to be synonymous with the thumbstall squid, *Lolliguncula brevis*.

In 1878 Calkins, in his Catalogue of the Marine Shells of Florida, recorded *Argonauta argo*, *Octopus rugosus* (= *O. vulgaris*), *O. vulgaris*, *Onychoteuthis bartlingii* (= *O. banksi*) and *Spirula peronii* (= *S. spirula*) from the Florida coasts. His statement that *Octopus rugosus* occurs in the Gulf Stream casts some doubt upon its identity, however, as no member of the genus *Octopus* is pelagic. He may have referred to *Tremoctopus violaceus*. Again, *Octopus vulgaris* may refer to *O. briareus*, unknown at that time.

Simpson, in 1887, lists *Octopus rugosus* and *vulgaris*, a pen possibly from an *Ommastrephes*, and the shells of *Spirula peronii* (= *S. spirula*) from the Florida coasts.

In 1882, Verrill published his review of the cephalopods of the Atlantic coast and mentions records of three squids from Florida waters: *Loligo gahi*, *Sepioteuthis sepioidea*, and *Lolliguncula brevis*. Unfortunately, *Loligo gahi* is not known to occur in the waters around Florida as it is native to the west coast of South America. Probably this was *Doryteuthis plei*, the arrow squid, but the exact identity of Verrill's specimen remains uncertain.

In 1929-1931 Robson published his monographic review of the octopoda, mentioning various records from Florida, and in 1932 he discussed briefly some octopods and their eggs from the Dry Tortugas and the west coast of Florida, mostly from material collected by T. H. van Hyning.

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In 1937, Adam reported upon the collections made in the West Indies by the Belgian school ship MERCATOR and described a small octopod, *Octopus mercatoris*, collected at the Dry Tortugas. However, Pickford (1945) showed, in her monographic review of the littoral octopods of the Western Atlantic, that this was a small *O. joubini*. She listed three octopods, *O. vulgaris*, *O. briareus*, and *O. joubini*, as occurring in Florida waters.

Berry (1934) lists about 55 valid species for the coast of the eastern United States and of these 8 are reported from Florida coasts, including a small octopod described by him (1920) as *Polypus scorpio* and now considered to be the young stage of *Scaevargus unicolor*.

Smith (1937) in his East Coast Marine Shells, long a standard work for shell collectors along the Florida coasts, lists 5 species from Florida of which *Argonauta gondola* and *Octopus rugosus* are synonyms for *Argonauta hians* and *Octopus vulgaris*.

Since 1949 the present author has published a series of papers (1949-1954), on the cephalopods of the coasts of Florida, based upon material in the collections of the Marine Laboratory, the United States National Museum and the Museum of Comparative Zoology at Harvard. The collections made by the ATLANTIS off Cuba in 1938-39 (Voss, 1955) added considerably to our knowledge of Floridan cephalopods. Since 1950 the U. S. Fish and Wildlife Service vessel OREGON has been doing exploratory work in the Gulf of Mexico, much of it off the west and north-west coast of Florida, and the results of this work were published recently (Voss, 1956).

In the course of these studies the author has compiled a checklist of the cephalopods of Florida and this now amounts to 39 species. These species are listed in phylogenetic order in the following checklist, together with a note as to their habitat and all of the records available to the author at the present time. In the listing of the records ML is used for records accumulated by the Marine Laboratory of the University of Miami, USNM for records in the United States National Museum, and MCZ for records in the Museum of Comparative Zoology at Harvard.

OREGON refers to collections made by the United States Fish & Wildlife Service vessel OREGON, and TRITON to a small collection of cephalopods made by T. L. and P. L. McGinty aboard the yacht TRITON owned by A. R. Thompson. The name

Pickford refers to the records of octopods given by Pickford (1945).

Keys and figures to most of the species recorded here may be found in Voss (1955 and 1956):

Class CEPHALOPODA

Subclass COLEOIDEA

Order Sepioidea

Family SPIRULIDAE

Genus *Spirula* Lamarck, 1799

S. spirula (Linnaeus, 1758)

Shells as flotsam on both coasts. The living animal is found only in deep water and is unrecorded off Florida.

Family SEPIOLIDAE

Genus *Rossia* Owen, 1828

R. tenera (Verrill, 1880)

In deep water off both coasts. 40-60 fms. off Palm Beach (TRITON); 100 fms. off Miami, 90-125 fms. off Sombrero Light, Dry Tortugas (all ML); upper Gulf (OREGON).

R. equalis Voss, 1950

In deep water off both coasts 65-100 fms. off Sombrero Light (USNM, ML), 100 fms. off Pelican Shoal (ML), upper Gulf (OREGON).

R. antillensis Voss, 1955

In deep water off both coasts. 105 fms. off Jacksonville Beach (ML), off Pensacola (OREGON).

R. bullisi Voss, 1956

In deep water off north west Florida in 200-262 fathoms. (OREGON).

R. tortugaensis Voss, 1956

Off Dry Tortugas in 283-375 fathoms (USNM).

Order Teuthoidea

Suborder MYOPSIDA

Family PICKFORDIATEUTHIDAE

Genus *Pickfordiateuthis* Voss, 1953

P. pulchella Voss, 1953

A small species living in *Thalassia* beds. Bear Cut, Miami (ML), Crandon Park, Key Biscayne; Old Rhodes Key; Key West (ML, USNM, all collected by Craig Phillips).

Family LOLIGINIDAE

Genus *Lolliguncula* Steenstrup, 1881*L. brevis* (Blainville, 1823)

This is *Loligo hemiptera* Howell, 1868. It is a coastal shallow water species occasionally venturing into brackish water. Fernandina, Miami, Key Largo (ML); Key West (MCZ, ML); Dry Tortugas (ML); Charlotte Harbor (MCZ); Tampa, Apalachicola Bay, Cape San Blas (all ML).

Genus *Loligo* Lamarck, 1798*L. pealei* Lesuer, 1821

Not common in our area. Fernandina, Miami, Key West, 10 fms. off Dry Tortugas (all ML); upper Gulf (OREGON).

Genus *Sepioteuthis* Blainville, 1824*S. sepioidea* (Blainville, 1823)

This is a tropical species limited apparently to the lower east coast. Miami, Biscayne Bay, Garden Cove (all ML); Key West (MCZ, ML); Dry Tortugas (Verrill).

Genus *Doryteuthis* Naef, 1912*D. plei* (Blainville, 1823)

The arrow squid is a tropical species limited in its northward range to south Georgia. Miami, Florida Keys, Dry Tortugas (all ML).

Family ENOPLOTEUTHIDAE

Genus *Abralia* Gray, 1849*A. veranyi* (Rüppell, 1844)

A bathypelagic species. Taken in plankton tow off Key West (ML).

A. redfieldi Voss, 1955

Bathypelagic. Recorded from plankton hauls in the Florida Current off Miami (ML).

Genus *Abraliopsis* Joubin, 1896*A. morissi* (Verany, 1837)

Bathypelagic. Recorded from plankton hauls in the Florida Current off Miami (ML).

Genus *Thelidoteuthis* Pfeffer, 1900*T. alessandrini* (Verany, 1851)

Bathypelagic. Recorded from plankton hauls off Miami in the Florida Current (ML).

Genus *Pyroteuthis* Hoyle, 1904*P. margaritifera* (Rüppell, 1844)

Bathypelagic. Recorded from plankton hauls in the Florida Current off Miami (ML).

Genus *Pterygioteuthis* Fischer, 1896*P. giardi* Fischer, 1896

Bathypelagic. Recorded from plankton hauls in the Florida Current off Miami.

Family OCTOPODOTEUTHIDAE

Genus *Octopodoteuthopsis* Pfeffer, 1912*O. megaptera* (Verrill, 1885)

Bathypelagic. Recorded from plankton hauls in the Florida Current off Miami (ML).

Family ONYCHOTEUTHIDAE

Genus *Onychia* Lesueur, 1821*O. caribaea* Lesueur, 1821

Oceanic. Washed up on the beach at South Lake Worth Inlet (ML); Miami, Sanibel Island (all ML).

Genus *Onychoteuthis* Lichtenstein, 1818*O. banksi* (Leach, 1817)

Oceanic. Off Miami, Key West, Dry Tortugas (all ML).

Family ARCHITEUTHIDAE

Genus *Architeuthis* Steenstrup, 1857*A. princeps* Verrill, 1875

The giant squid has only been reported once from the Florida coast. A mangled specimen about 18 feet in length was picked up on the surface off Fowey Rock Light (ML).

Family HISTIOTEUTHIDAE

Genus *Calliteuthis* Verrill, 1880*C. reversa* Verrill, 1880

Bathypelagic. Fragments of a head and arms attributed to this species have been taken from the stomach of a dolphin, *Coryphaena*, off Miami (ML).

Family OMMASTREPHIDAE

Genus *Illex* Steenstrup, 1880*I. illecebrosus* (Lesueur, 1821)

Oceanic. Off Jacksonville Beach in 105 fathoms, Dry Tortugas (all ML).

Genus *Ommastrephes* Orbigny, 1839*O. pteropus* Steenstrup, 1856

Oceanic. Caught alive off the beach at Palm Beach, Miami, Dry Tortugas (all ML); upper Gulf (OREGON).

Family CRANCHIIDAE

Genus *Cranchia* Leach, 1817*C. scabra* Leach, 1817

Planktonic. Melbourne, Hillsboro Inlet, off Miami (all ML); Key West (ML).

Order Octopoda

Family OCTOPODIDAE

Genus *Tetracheledone* Voss, 1955*T. spinicirrus* Voss, 1955

A deep water species. 105 fms. off Jacksonville Beach (ML); upper Gulf (OREGON).

Genus *Octopus* Lamarck, 1798*O. briareus* Robson, 1929

Shallow water. Lantana, Miami, Soldier Key, Ragged Keys (all ML); Upper Matecumbe (ML); Teatable Key, Indian Key, Long Key, Sand Key, Key West (all Pickford); Dry Tortugas (Pickford, ML); Marquesas Key (Pickford); Anclote Key off Tarpon Springs (Pickford).

O. burryi Voss, 1950

Moderate to deep water. Off Sombrero Key in 100 fms. (USNM); upper Gulf (OREGON).

O. joubini Robson, 1929Shallow water. This is *O. mercatoris* Adam, 1937, from Dry Tortugas. This small species commonly lives within small bivalve shells. Biscayne Bay, Soldier Key, Marco Beach, Sanibel Island (ML); Captiva Island, Stock Island, Palmetto Key, Pine Island Sound, Pelican Bay, Tampa, Port St. Joe (all Pickford).*O. hummelincki* Adam, 1936

Shallow water. Easily identified by the purple ocellus below the eye. Long Reef, French Reef, Molasses Reef (all ML).

O. macropus Risso, 1826

Shallow to moderate depths. Only reported once from shrimp haul off Key Biscayne (ML).

O. vulgaris Lamarck, 1798

Shallow water. North Lake Worth Inlet (Pickford); South Lake Worth Inlet (ML); Miami Beach (ML); Largo Sound (ML); Teatable Key (ML); Indian Key (ML); Sand Key (Pickford); Dry Tortugas (ML, Pickford); Captiva Island, Egmont Key, Tampa, Anclote Key, Homosassa River, (all Pickford).

Genus *Danoctopus* Joubin, 1933*D. schmidti* Joubin, 1933

Recorded from off Dry Tortugas in 283 fms. (USNM).

Genus *Bathypolypus* Grimpe, 1921*B. arcticus* (Prosch, 1849)

Deep water. 105 fms. off Jacksonville Beach (ML); off Delray Beach (MCZ).

Genus *Scaeurgus* Troschel, 1857*S. uniccirrus* (Orbigny, 1840)

Moderate depths. 40-50 fms. off Palm Beach, 50 fms. off Delray Beach, 85 fms. off Sombrero Light (all TRITON); off Key West in 200 fms. in old beer bottle (ML). This is the adult of *Polypus scorpio* Berry, 1920, from off Miami.

Genus *Pteroctopus* Fischer, 1882*P. tetracirrus* (Delle Chiaje, 1830)

Moderate depths. 40-60 fms. off Palm Beach (TRITON); upper Gulf (OREGON).

Family TREMOCTOPODIDAE

Genus *Tremoctopus* Delle Chiaje, 1830*T. violaceus* Delle Chiaje, 1830

Pelagic. Boynton Beach, Pompano Beach, Fort Lauderdale, Miami, Cape Florida (all ML).

Family ARGONAUTIDAE

Genus *Argonauta* Linnaeus, 1758*A. argo* Linnaeus, 1758

Shells as flotsam on Atlantic and Gulf beaches. The shells with animals have been recorded from: Palm Beach, Boynton Beach, Delray

Beach, Pompano, Fort Lauderdale, Miami, Bear Cut (all ML). They are commonly eaten by both dolphin and sailfish.

A. *hians* Solander, 1786

Shells rarely found as flotsam. Delray Beach, Pompano Beach as shells (all ML); in dolphin stomachs from off Miami (ML).

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